

# CALL FOR QUALIFIED TECHNOLOGIES – ADVANCED CORDWOOD BOILER RENEWABLE HEAT-NY



NYSERDA has launched the Renewable Heat NY Program, and needs to identify manufacturers of high-efficiency, low-emissions (HELE) advanced cordwood boilers that will be eligible for installation under this program. To be listed as a manufacturer with a NYSERDA-qualified technology, manufacturers must submit information and data (see Application Requirements below) to **RHNY@nyserda.ny.gov**

NYSERDA is seeking to prequalify residential and commercial advanced cordwood boilers. To become qualified for Renewable Heat NY, all advanced cordwood boilers must be low-mass (low-volume) and have sensors and controls to optimize combustion performance. This result is most easily achieved using a staged combustion design with lambda control. The advanced cordwood boiler must have a minimum annual thermal efficiency of 60% using the higher heating value (HHV) of cordwood and tested on the Brookhaven National Laboratory (BNL) Test Method for Measurement of Particulate Matter (PM) and Carbon Monoxide (CO) Emissions and Heating Efficiency of Wood-Fired Hydronic Heating Appliances with Partial Thermal Storage (BNL Test Method). All advanced cordwood boilers must be tested using the BNL Test Method and be approved by the New York State Department of Environmental Conservation (NYSDEC) for particulate matter emissions (6 NYCRR Part 247).

## Application Requirements

Applications are being accepted through December 2016. Manufacturers must provide the following to apply:

- 1) A cover letter
- 2) BNL test method report completed by a technically competent, independent third party

Manufacturers must submit energy and emissions performance verification results of the same boiler model and cordwood fuel combination with the qualified technology application. Performance testing for thermal efficiency, particulate matter, and CO must have been performed by the Brookhaven National Laboratory Test Method ([www.dec.ny.gov/chemical/89328.html](http://www.dec.ny.gov/chemical/89328.html)) for boilers with partial thermal storage and all results for the categories tested must be contained in the report and include start-up, steady-state, and end-phases of the burn. No alternative test method results will be considered for Advanced Cordwood Boilers in the Renewable Heat NY program.

- 3) Warranty information

The warranty description should include the length and limits of coverage for the boiler and components (e.g., pressure vessel, combustion chamber, computer processing unit, other components).

- 4) Letter of certification from NYSDEC

- 5) If necessary, convert any alternative units in any part of the supporting information and data to the units as shown:

High-Efficiency and Low-Emissions Advanced Cordwood Boiler Performance	
Thermal Efficiency (HHV)	≥60%
Annual Particulate Matter Emissions	<0.32 lb/mmBtu
Annual CO Emissions	ppm at 7% O <sub>2</sub>

## Application Evaluation

Applications that fulfill the Application Requirements will be reviewed according to the following evaluation criteria:

1. Does the cordwood boiler meet the basic requirements of an advanced technology, namely low-mass (low-volume) and sensors and controls to optimize combustion performance?
2. Was the performance evaluation conducted using the BNL Test Method for Measurement of Particulate Matter (PM) and Carbon Monoxide (CO) Emissions and Heating Efficiency of Wood-Fired Hydronic Heating Appliances with Partial Thermal Storage?
3. Was the BNL Test Method performed by an independent, technically-competent third party?
4. Is a cover letter provided converting test results to appropriate units of thermal efficiency (HHV), PM (lb/mmBtu), CO (ppm, 7% O<sub>2</sub>)?
5. Does the technology meet the requirements for annual thermal efficiency (HHV) using the BNL Test Method?
6. Does the technology meet the requirements for fine particle emissions using the BNL Test Method?
7. Does the application report annual carbon monoxide emissions using the BNL Test Method?
8. Does the test report include results for the categories tested and include energy and emission results for start-up, steady-state, and end-phases of the burn?
9. Has NYSDEC accepted the boiler as a certified model using the BNL Test Method report results and supporting test data?
10. Does the application provide complete warranty description?

Applications are being accepted through December 2016. Questions may be submitted to [RHNY@nyserda.ny.gov](mailto:RHNY@nyserda.ny.gov)

